

Notice of Allowability

Application No.

10/766,396

Examiner

Sara Addisu

Applicant(s)

ERICKSON, ROBERT A.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/9/06.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/9/06 has been entered.

Allowable Subject Matter

Claims 1-17 are allowed.

Regarding independent Claims 1, 5 and 9: The closest prior art to the instant invention is Yamazaki et al. (U.S. Patent No. 6,453,782). Yamazaki et al. teaches a tool rest (tool holder) (20) having an insert (22) that is aligned/lies on the same centerline as the tool and rotational axis (CT2) while also being aligned in a direction away from the direction of cutting of the workpiece (see Figures 1 and 4b). Yamazaki et al. also teaches the centerline of the tool holder (20) being able to move freely in the B axis, indicated by G-H arrow in fig 1 (Col. 2, lines 54-59), therefore be aligned at a non-zero angle (θ) with respect to an axis, P, that is perpendicular to a longitudinal axis work

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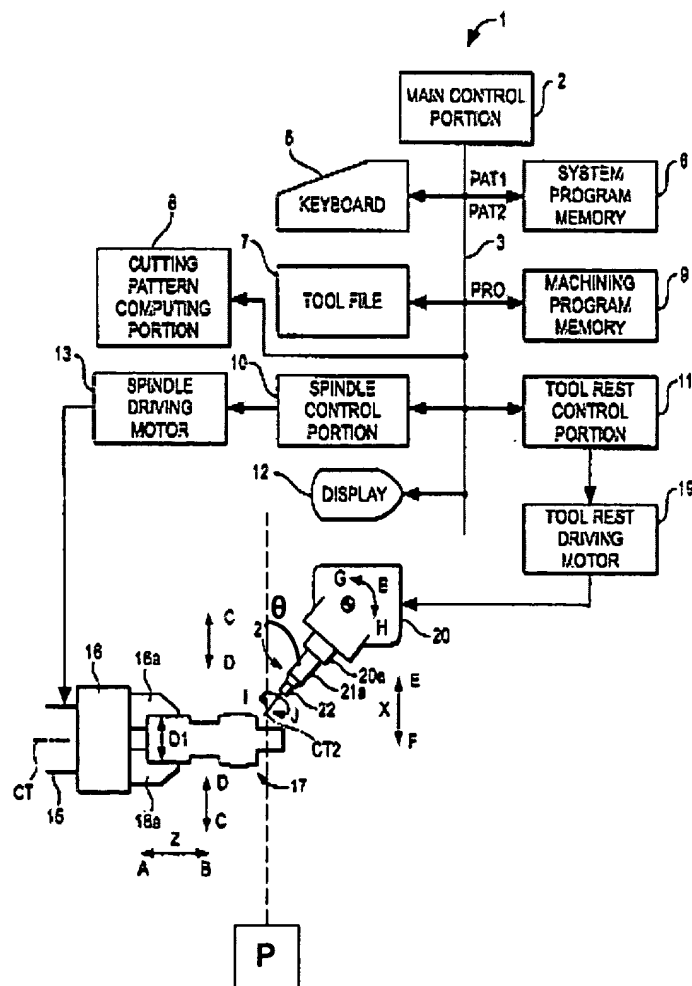
piece (17) (see diagram below). Furthermore, Yamazaki et al. teaches machining program (PRO) being used to decide the degree of the B-axis angle (i.e. non-zero angle) (Col. 4, lines 60-63). Additionally, Yamazaki teaches a tool holding portion (20a) is formed on the tool rest (20) with a turning tool (21) attached to it. The tool holding portion (20a) is provided as to freely fix and hold a tool in a predetermined holding state and to be freely driven to rotate (therefore has a tool spindle rotatably mounted to a spindle housing) in the direction as shown by the arrows I and J, which is the direction around the axial center CT2, and be positioned ('782, Col. 2, lines 60-67). Examiner respectfully points out that even though Yamazaki teaches in figures 4a & 4b, the tool making triangular screw (therefore may need inserts with sharp corners), Yamazaki does not teach away from making different kind of screws. In fact, Yamazaki teaches the tool being capable of forming screws having optional shape ('782, Col. 3, lines 12-15). Additionally, Yamazaki teaches the possibility of machining flank portions 17a and 17b of the ridge at the optional angle, and to easily machine various screw ridges such as trapezoidal screws, square screws and triangular screws by tools of the little numbers such as a rectangular byte 21A and a lozenge byte 21B, even if the exclusive tools formed with the shape of a ridge is not used. Given this flexibility of Yamazaki's tool, Examiner asserts that screw thread having a radius at its thread valley is old and well known for the purpose of eliminating stress concentration and to enhance more thread contact and thus decrease thread failure, as evidenced by Baba, JP 2000133436 (see abstract). If one was to make a screw having a radius at its thread valley (as evidenced by Baba, JP 2000133436), then a different insert would be necessary thus

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the pattern for that particular cut would be based on the geometry of the insert and the tool would be fixed at a non-zero angle as taught by Yamazaki.

In order to cut the thread using Yamazaki et al.'s invention, the toolholder must be moved to plurality of angles with respect to the workpiece. Therefore, the prior art of record, Yamazaki et al. fail to anticipate or make obvious the toolholder being fixed at a single fixed non-zero angle for the duration of the machining operation.

FIG. 1



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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SA
5/22/06

Monica S. Carter
MONICA CARTER
SUPERVISORY PATENT EXAMINER